WHAT IS CLAIMED IS:

1.A Streaming based contents distribution network system for implementing Multimedia File Playing using networks, said system comprising:

5   a splitter creating a file list and a header file about a plurality of UUID (Universally unique identifier)-type files by splitting a multimedia file having large capacity;

       a merger restoring the multimedia files split by said
10   splitter to an original file state when necessary;

       an admin client having said splitter and said merger;

       an original contents server receiving split files from said admin client and saving said files on a first internal database;

15   a CMS server installed in said original contents server detecting data creation, modification and deletion in real time;

       a plurality of CAS servers receiving contents files and header files from said original contents server,
20   the received files split from an original file by said splitter and saving said received files separately and said saved files being synchronized by said CMS server;

       an IPMaster server managing Internet traffic of said system;

25   a CDMaster server synchronizing with a contents file saved on each of said CAS server by cooperating with said CMS server;

       a CDMaster server synchronizing with contents files saved on each of said CAS servers by cooperating with
30   said CMS server;

       a plurality of SM Agents (Server Monitoring Agents) installed in each of said CAS servers, transmitting information for CPU, memory and session of a corresponding CAS server to said IPMaster server in
35   real time so that if a client requests, said IPMaster server can select the optimal CAS server to the

corresponding client and provides the requested contents from the corresponding CAS server;

a plurality of contents servers, each of them having a pair of said CAS server and said SM Agent;

a user-side Authentication Server performing authentication when a user logs in;

a Web server letting a client authenticated by said user-side Authentication Server connect to a web site constructed on Internet and access to a variety of contents;

a Primary Authentication Gateway Server having an authority to let a user access to contents saved on each contents server and checking whether each of said split contents files can be downloaded or not;

a Secondary Authentication Gateway Server realizing non-stop service by providing alternative routing for authentication in case of faults of said Primary Authentication Gateway Server;

an Authentication Proxy server installed in each of said Primary Authentication Gateway Server and said Secondary Authentication Proxy Server and sharing Authentication information among said Primary/Secondary Authentication Gateway Server and said user-side Authentication Server, and transmitting said Authentication information among said Primary/Secondary Authentication Gateway Server and said user-side Authentication Server; and

a dedicated client/player for said system getting authentication by requesting the authentication to said Primary Authentication Gateway Server in case that there are desired contents to download, and requesting the information about said desired contents to said IPMaster server to download said desired contents from an optimal contents server appointed by said IPMaster server and saving the downloaded information on a second internal database, and reproducing only the

files saved on said second database according to a predefined schedule although all of said split files are not saved on said second database, and downloading the rest files while the reproduction is being made and saving the downloaded files on said second database so that the reproduction can be made continuously without a break.

2. A system as set forth in claim 1, wherein said system further comprises a DRM (Digital Rights Management) Encryption/Decryption Module in charge of copyright protection and management about said split and merged multimedia contents in encrypting each of said split files and in decrypting said merged file.

3. A system as set forth in claim 1, wherein a manager considers network traffic, state of network traffic and state of said system and makes it possible to split a desired file into files having a desired form and size and to transmit data without delay by using the most rapid method.

4. A system as set forth in claim 1, wherein said client/player downloads files to be reproduced in future from a plurality of contents servers saving the same contents through multi thread in parallel with the reproduction of downloaded files at the same time.

5. A system as set forth in claim 1, wherein said client/player is a multi-tasking system capable of parallel downloading of the split files by using a Multi-Thread and uses an ITM solution of a Stand-aside type, which makes it possible to download files continuously by comparing a file list of a Media-header part through normally operating servers even though a fault occurs in some servers among a plurality of contents servers.

6. A streaming contents distribution network system having an original contents server and a plurality of contents servers copying and saving the original

contents, said system comprising:

an ENSplitter splitting a multimedia file to a plurality of UUID(Universally unique identifier) type files and creating a header file and saving the header file on a database of said original contents server and also performing file merging, encrypting and decrypting of said UUID files;

an ENSource participating in both a process of file split/mergence and a process of media reproduction and operation differently in each process and really splitting/merging media file and creating/analyzing a corresponding Header file, wherein said ENSource encrypts/decrypts UUID file and operates as a regular Direct Show Source Filter and transmits media data according to data requests of a Filter Graph and operates as a source plug-in DDL when reproducing Window media file and has UUID files and a table having information for positions and capacities of said UUID files;

an ENNetwork downloading a plurality of UUID files saved on a database in each contents server into a database of a Client side and saving on a Hard Disk of a client as a form of a Temporary File and managing the saved files, wherein at the same time if said ENSource requests a certain UUID file, said ENNetwork downloads or searches the file and then transmits a file handle (a Header file) to said ENSource and has a list of UUID files and a table saving a list of a Temporary file corresponding to the UUID files; and

an ENPlayer being a Direct Show Application and playing a role as a real Filter Graph and requesting data by using a clear description for its position and capacity to said ENSource through a Filter Graph Manager, and processing the transmitted data and reproducing media and having a play function of media files.

7. A system as set forth in claim 6, wherein said ENSplitter has a source file, an object file, a capacity of a file to be split, a Means of function selection, a Means of format selection and a Window where said Means of function selection has a split button and a mergence button, and said means of format selection has an AVI button, an MPEG button and a Window Media button and said system uses an ITM solution of a Stand-aside type.

8. A system as set forth in claims 6 or 7, wherein in encrypting said split files and in decrypting said merged file said system further comprises a DRM (Digital Rights Management) Encryption/Decryption Module in charge of copyright protection and management about said split and merged multimedia contents.

9.In a streaming contents distribution network system having an Original contents server saving original contents and a plurality of contents servers copying and saving said original contents for implementing Multimedia File Playing using a network, a method for splitting a multimedia file, transmitting and reproducing the transmitted files, said method comprising:

a step for splitting a multimedia file or merging multimedia files through a File Splitter;

a step for uploading said split or merged multimedia files to an Admin Server;

a step for copying said split contents files and a Header file to a database of a plurality of contents servers by using the Admin Server and synchronizing the contents;

a step for connecting to a Web server and selecting contents by a Client, wherein an Authentication Server of a user side performs authentication for a user ID, contents, completion time of contents and requests a billing process about an authenticated user to a

Billing System Server and the Authentication Server of a user side requests authenticate information to the Authentication Proxy server and then the Authentication Proxy server transmits authenticate information to the

5   Authentication Server of a user side;

a step for downloading Authentication Key and a Header File into a Client;

a step for requesting an optimal contents server to an IPMaster for downloading contents by a Client;

10   If an IPMaster selects the optimal contents server according to said request and notifies the selected result to the client, a step for requesting contents files to the corresponding contents server with an authentication Key by the Client, and requesting

15   verification to a Primary Authentication Gateway Server whether authenticated or not by the contents server according to the user's request;

a step for downloading the requested file if said Primary Authentication Gateway Server makes the

20   Authentication;

a step for saving downloaded file on a temporary storage as a temporary file by a client according to a schedule;

a step for reproducing said downloaded data by using a

25   dedicated player; and

a step for deleting said temporary file saved on a temporary storage with the completion of the reproduction.

10.A method as set forth in claim 9, wherein in

30   splitting of a file, said split file is encrypted by using a DRM Encryption/Decryption Module and said system uses an ITM solution of a Stand-aside type.

11. In a streaming contents distribution network system having an Original contents server saving

35   original contents and a plurality of contents servers copying and saving said original contents for

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implementing Multimedia File Playing using a network, a method for splitting a multimedia file comprising:

a step for transmitting a Header file path to an ENSource by an ENSplitter that is a file splitter;

a step for operating a Filter Graph Manager by an ENSplitter so that an ENSource participates in connecting a Filter Graph;

if a Parser Filter requests data to the ENSource in said participating process, a step for transmitting the data requested by the Parser Filter existing in a Filter Graph and recording the particulars by an ENSource;

a step for splitting a media file based on the information of connection and split capacity by the ENSource if the ENSplitter gives a split order through an IENSource interface; and

a step for dynamically allotting UUID type files needed in said file split and performing encryption when necessary, wherein the ENSource arranges the UUID files and their tables for position and capacity after completion of the file split, and then creates a Header file.

12. A method as set forth in claim 11, wherein in splitting a file, said split files are encrypted by using a DRM Encryption/Decryption Module and said system uses an ITM solution of a Stand-aside type.

13. A method as set forth in claim 11, wherein in case that a corresponding source file is defined as connection information needed in structuring a filter graph, said method further comprises a step for performing said information analysis in order to complete file split perfectly and in this case x and y of (x, y) are indices for searching header information that denotes a position in a file and the position information 0 is a starting point of a header file.

14. A method as set forth in claim 13, wherein said

method further comprises a step for arranging a plurality of small-sized file pieces created in file split on the basis of said connection information.

15. A method as set forth in claim 11, wherein said method further comprises a step for adding a parser filter and changing a protocol in accordance with a format for the format verification and the improvement of efficiency.

16. In a Streaming contents distribution network system for implementing Multimedia File Playing using a network, a file merging method for verifying whether a multimedia file was restored normally or not, wherein the multimedia file was split in the system and transmitted from the system, said method comprising:

a step for transmitting a Header file path to an ENSource through an IENSource interface of the ENSource by an ENSplitter, wherein the ENSplitter operates as a Merger and is a starting point for file merging in case merging UUID files;

a step for analyzing the Header file and restoring UUID files, their tables for position and capacity by the ENSource;

a step for requesting UUID files through an IENManager interface of an ENNetwork in accordance with the information recorded in a Header file by the ENSource;

a step for copying or downloading the UUID files which the ENSource requested and saving the downloaded files on a temporary storage and transmitting a corresponding file handle to the ENSource by the ENNetwork; and

a step for reading data through the file handle transmitted from the ENNetwork and performing file merging and restoring an original file by the ENSource, and in this case if a file is encrypted, merging process is performed after decryption of the file.

17. A reproduction method of a multimedia file that is split and transmitted in a Streaming contents

distribution network system for implementing Multimedia
File Playing using a network, said method comprising:

a step for making a Direct show application play a
role as a main starting point when reproducing
5   multimedia files, and operating in accordance with the
request of a filter graph and transmitting a Header
file path appointed by the Direct show application to
an IfileSourceFillter interface of an ENSource through
a filter graph manager;

10   a step for analyzing the Header file and restoring
UUID files and their tables for position and capacity
by the ENSource;

a step for requesting data needed in connection and
reproduction to the ENSource in sequence by filter
15   graph and at this time transmitting the information
specifying the data position and capacity of a desired
file;

a step for finding UUID files in accordance with the
information recorded in a Header file about the data
20   requested by a filter graph and requesting the file
through an IENManager interface of an ENNetwork by the
ENSource;

a step for copying or downloading a UUID file which
the ENSource requests and saving the copied or
25   downloaded file on a temporary storage and transmitting
a corresponding file handle to the ENSource by the
ENNetwork; and

a step for reading data through a file handle
transmitted from the ENNetwork and transmitting the
30   read data to a filter graph and in this case if a file
is encrypted, performing decryption by the ENSource.